

HYDROPHOBIA IN BAJA CALIFORNIA.

By DANE COOLIDGE

WHEN, in 1884, Pasteur discovered the true nature and cure of hydrophobia, he dispelled the accumulated superstition of centuries regarding this mysterious and dreaded disease. But in some countries where hydrophobia exists his cure is not yet known, and the old superstitions remain. While collecting mammals near San José del Cabo, in the cape region of Lower California, two summers ago, I found the country people very fearful of wild animals, especially of skunks and coyotes. My Mexican boy, whom I had sent on an errand, remained perched half the afternoon in a thorny mesquite tree because he had seen a coyote and was afraid it was *rabioso*. But they fear the skunks most of all because of their habit of approaching men in the night while they sleep, and biting them on the toe or ear, or any exposed part. In defense, unusual precautions are taken to exclude them. The windows of the houses are barred with iron, and the doors are made in halves, horizontally, so that the lower part may be closed to keep out animals and snakes without interfering with free ventilation. The common people, who live in brush houses, blockade their doorways at night, and rely on their cur dogs to attack any animal which may come near.

Notwithstanding all this evidence, and innumerable ghastly stories, I remained a month in the country, at the rancho of Francis Pazik, a very intelligent and well-educated Bohemian, without seeing any rabid animals. Then, one evening just at sundown, a crowd of men came up the path, leading one of Pazik's mules and dragging the carcass of a skunk. They said that it had come out into the open field where the mule was picketed and bitten it on the hind foot. All of them insisted that it was rabid, and cited its extreme emaciation as a proof. The young man who dragged it showed me his great toe, half burned off with blue vitriol, and told me that a skunk had bitten him there two months before, and the doctors had burned it. These native "doctors" are uneducated men who live on the superstition of the people. In the case of hydrophobia their methods are characteristic. There are in the cane fields little insect-eating animals called shrews which, in that country, give off a scent so like that of a skunk that Pazik has hunted them out with his dogs in the night by mistake. The "doctors" pay as much as two dollars apiece for shrews on urgent occasions, and, mixing their bodies with herbs and roots, form a concoction which they claim will ward off hydrophobia. Besides this, they also bleed the patient and cauterize the wound.

According to the Mexicans, there are two kinds of rabies: that affecting the head and that affecting the stomach. When animals have *rabia* in the head they become stupid and move about slowly, biting at everything they see or touch. They are not violent, and become very thin. But when they have rabies in the stomach it gives them great pain, and they bark and howl and race about frantically, chasing other animals and tearing them. Mr. Cipriano Fisher, of Santa Catarina, told me of his experience with a coyote which had rabies in the stomach. He was hunting deer at Cape San Lucas, and had killed two. Carrying the smaller one and his gun to camp, he returned unarmed, except for the knife which every one wears in that region, to bring in the other. As he went down a deep cañon he heard a coyote ahead, howling in the peculiar way which he knew to be characteristic of the *rabioso*. All the hunters claim they can recognize the howling of a rabid coyote, and they say that no other animal will answer it or go near it. The howling approached rapidly. Knowing that he could not escape by running back uphill, nor kill it with his knife without being bitten, he stepped quickly into the brush and cut a long green club. As he turned back into the open place he saw the coyote down the cañon, leaping up and snapping at the air. When the coyote saw him it broke into a furious run up the trail, and when, as he says, about thirty feet away, made a flying leap at his face. He jumped to one side, struck the rabid animal in the back of the head as it passed, and killed it with the one blow.

Skunks are particularly dangerous to persons who sleep out at night. J. Ellis McLellan, a field collector of the United States Department of Agriculture, whom I met at San José del Cabo, told me of an unpleasant experience he had with a skunk while coming down from La Paz. On account of the heat he had ridden in the night as far as Agua Caliente, where he stopped near a ranch house to sleep till morning. Although the night was warm, he covered his head with a *serape* for protection from insects and wandering animals. Early in the morning he was awakened by a twitching at his blanket and, raising the *serape*, saw a skunk biting and jerking at it. Realizing the gravity of the situation, he reached for his heavy knife, and then, suddenly throwing aside the *serape*, he leaned forward and put his whole force into one blow. As he ducked under the blanket again, for protection, the dogs from the house rushed out in a body and pounced upon the dying skunk, which they worried on top of McLellan until the ranch people beat them off. When skunks bite at men's toes and ears, or at blankets in this way, it is taken as an indication that they are rabid.

Shortly after this I saw a young man at Miraflores who had just

been seized with hydrophobia. Two months before he had been bitten on the great toe by a skunk as he lay asleep in his house at Agua Caliente, but had shown no symptoms of the disease until that day, when he suddenly began to bite at the door jamb in the store at Miraflores. They put him into the brick jail, where he soon became very violent. When I went down to the jail the next morning I found a group of Mexicans about the huge wooden door, which was chained fast and tied with *riatas* in addition. From the inside there came a succession of thumps and blood-curdling groans and strangles. I peered in through the barred window, and saw the unfortunate man lying on his back in a corner, spasmodically kicking out his legs from his chest and rolling his dilated eyes. Suddenly he leaped to his feet and, grasping the iron bars, shook the great door violently, chained and tied as it was. Then he seemed to leap against the walls, and at last fell down, groaning. He soon became rational again, and began to talk through a crack in the door to an old man whom I took to be his father. He asked for water, but they would not give him any, and while he was pleading for a knife or pistol another spasm seized him.

Presently the judge came over with two policemen. They said they were going to take the *rabioso* out and tie him to a tree, because he was getting the jail too dirty, and might not die for a week. As soon as the spasm passed, and the man lay weak and moaning, the burly policemen loosed the *riatas*, and, stepping in quickly, seized him from behind. He protested pathetically against going into the hot sunshine, but they pushed him out and started toward the corral to tie him up. But when the fierce sun struck him he was racked by horrible convulsions. He kicked and struggled, bit at his shoulders, and blew spittle into the air when he threw his head back. The policemen breathed hard, and the old man, his father, hugged himself in agony as he walked behind. There was a desperate struggle, then, with a final paroxysm, the *rabioso* suddenly collapsed and hung limp in their arms. At first they thought that he was dead, but when he showed signs of life they carried him to the corral and tied him to a tree before he became conscious. Two days later he died.

Pasteur himself does not undertake to cure patients who have been seized with spasms; but the judge told me that, fifteen years before, an Italian doctor had come through their country making marvelous cures. When he arrived at Miraflores there was a *rabioso* in the jail who was so badly afflicted and so long-lived that the judge had ordered him to be shot. When the Italian doctor heard this, however, he asked permission to try an experiment on the man. This being granted, he had the patient lassoed, dragged to the river, and he'd under water until he was apparently drowned. After the *rabioso* was full of water, the doctor rolled him on a barrel and re-

suscitated him; then he gave him some medicine which eured him. Cipriano Fisher told me that he had eured a valuable bulldog of rabies by this same method, using the bitter juice of the *pitahaya*, a species of cactus, for medicine. This crude means of alleged cure is unique, and seems based on the theory that the antipathy of rabid animals to water, implied in the name hydrophobia, is the cause of their death, and partial drowning, therefore, a cure.

Rabies is extremely prevalent at times in certain districts of the Cape region. McLellan says it does not occur north of the tropic of Cancer—that is, of La Paz and Todos Santos—and it is hardly known in the thickly populated district about San José del Cabo, but at Cape San Lucas, and especially also along the base of the mountains near Miraflores and Agua Caliente, where it is very hot and dry, rabid animals are greatly to be feared. While collecting in these mountains I passed several good ranches which had been deserted because, as my guide said, stock could not be raised there successfully on account of the *rabia*.

This man had worked as a *ranchero* or stock herder for two years on one of these ranches, and had been obliged at one time to kill eleven cattle and seven sheep and goats in two weeks on account of their having rabies. It was part of his duty to follow up rabid coyotes, foxes, skunks, and wild cats when he saw them or heard their peculiar cry, and shoot them before they bit the stock. But he assured me very gravely that he preferred to work in the valley for less wages rather than have charge of Chollalito rancho; and when we camped there for a night he slept on top of the pack boxes, with his bare feet wrapped in blankets and a *serape* over his head, and reverently pulled out the blessed rag he wore around his neck, in order to more surely protect himself against the rabid skunks and coyotes. There is, however, very little danger in traveling through this interesting country. Cases of hydrophobia are comparatively rare, and some scientists who have collected in Baja California have even denied its existence there. But with the traveler, as with the native, there remains the vague, constant, but unrealized expectation of seeing some raging coyote come tearing through the cactus, or of having his toe bitten in the middle of the night as he sprawls in the heat and darkness.

PROFESSOR WELLDON, in the British Association, expressed his sense of the intellectual insolence of those who presume to say, notwithstanding our ignorance of animal characters, that because a characteristic seems to us minute and without importance, it is therefore without importance to the animal. Until we know the function of the animal throughout, and can picture its physiological processes thoroughly, we have no right to say, *a priori*, that this or that feature is of no use.